Activity Title: Designing A Habitat Activity Guide Page #: 20

Objective(s): Students will: identify the components of habitat that are essential for most aquatic animals to survive.

Method/Overview: Students design a habitat suitable for aquatic wildlife to survive in a zoo or an aquarium.

Subject Area(s): Science, Language Arts

Grade Level(s): 4-12
Notes to ensure high
alignment for every studen
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Standard	Performance Indicators (by grade clusters)	Evidence of alignment (text from activity description)	Notes to ensure high alignment for every student
English/Language Arts A. Process of Reading Students will use the skills and strategies of the reading process to comprehend, interpret, evaluate, and	Elementary Grades 3-4 1. Determine the meaning of unknown words by using a dictionary, glossary, or other reference sources.	Procedure #3 Ask each group to be responsible for designing an artificial habitat in which their animal could successfully live. Inform them that each team will be expected to conduct library research.	Allow students access to the Internet
appreciate what they have read.	Elementary Grades 3-4 2. Adjust reading speed to suit purpose and difficulty of the material.	Procedure #3	
	Middle Grades 5-8 1. Formulate questions to be answered while reading.	Procedure #3	
	Middle Grades 5-8 2. Reflect on what has been discovered and learned while reading, and formulate additional questions.	Procedure #3	
	Middle Grades 5-8 3. Identify specific devices an author uses to involve readers.	Procedure #3	
	Middle Grades 5-8 4. Use specific strategies (e.g., rereading, consultation) to clear up confusing parts of a text.	Procedure #3	
	Middle Grades 5-8 7. Summarize whole texts by selecting and summarizing important and representative passages.	Procedure #3	

	Middle Grades 5-8	Procedure #3	
	8. Read for a wide variety of purposes	110ccdate #5	
	(e.g., to gain knowledge, to aid in		
	making decisions, to receive		
	instructions, to follow an argument, to		
	enjoy).		
	Middle Grades 5-8	Due due #2	
		Procedure #3	
	9. Explain orally and defend opinions		
	formed while reading and viewing.		
	Middle Grades 5-8	Procedure #3	
	10. Adjust viewing and listening		
	strategies in order to comprehend		
	materials viewed and heard.		
	Middle Grades 5-8	Procedure #3	
	11. Generate and evaluate the notes they		
	have taken from course-related reading,		
	listening, and viewing.		
	Secondary Grades	Procedure #3	
	1. Demonstrate an understanding that		
	reading is a gradual process of		
	constructing meaning and revising initial		
	understandings.		
	Secondary Grades	Procedure #3	
	2. Demonstrate an understanding that a	1 Toccdure #3	
	single text will elicit a wide variety of		
	responses, each of which may be the		
	point of view of the individual reader or		
	listener.	72 1 1/2	
	Secondary Grades	Procedure #3	
	8. Find the meaning of relatively		
	uncommon technical terms used in		
	informational texts.		
	Secondary Grades	Procedure #3	
	11. Represent key ideas and supporting		
	details in various written forms (e.g.,		
	outline, paraphrase, concise summary).		
English/Language Arts	Elementary Grades 3-4	Procedure #5	

B. Literature and Culture Students will use reading, listening, and viewing strategies to experience, understand, and appreciate literature and culture.	Demonstrate awareness of the culture and geography pertinent to the texts they read.	Once the models are complete, ask each team to report to the rest of the class.	
	Elementary Grades 3-4 11. Apply effective strategies to the reading and use of nonfiction (e.g., reference sources, articles, histories, biographies, autobiographies, diaries, and letters) using texts with an appropriate complexity of content and sophistication of style.	Procedure #3 Ask each group to be responsible for designing an artificial habitat in which their animal could successfully live. Inform them that each team will be expected to conduct library research or consult research materials.	
	Middle Grades 5-8 2. Identify specific interests and questions and pursue them by identifying pertinent literature and media.	Procedure #3 Ask each group to be responsible for designing an artificial habitat in which their animal could successfully live. Inform them that each team will be expected to conduct library research or consult research materials or resource people to determine the life requirements of each creature. In addition, they must investigate and establish the characteristics of the natural habitat of the animals.	
	Middle Grades 5-8 9. Apply effective strategies to the reading and use of moderately long nonfiction texts (e.g., reference sources, articles, editorials, histories, biographies, autobiographies, diaries, letters, and commentaries), which have an appropriate complexity of content and sophistication of style.	Procedure # 3	
English/Language Arts	Secondary Grades 8. Apply mature strategies to the reading and interpretation of lengthy adult level nonfiction texts with appropriate complexity of content and sophistication of style. Elementary Grades 3-4	Procedure #3	
C. Language and Images	3. Identify the use of nonverbal cues in	Consult research materials or resource people to determine	

Students will demonstrate an understanding of how words and images communicate.	conversations.	the life requirements of each creature. In addition, they must investigate and establish the characteristics of the natural habitat of the animals.	
	Elementary Grades 3-4 3. Identify the use of nonverbal cues in conversations.	Extension #3 Discuss the reasons for and against keeping aquatic wildlife in captivity in zoos and aquaria.	
	Middle Grades 5-8 4. Use knowledge of the fundamental parts of speech when writing and speaking.	Procedure # 3	
English/Language Arts D. Informational Texts Students will apply reading, listening, and viewing strategies to informational texts across all areas of curriculum.	Elementary Grades 3-4 1. Use information contained in chapter and section headings, topic sentences, and summary sentences to construct the main ideas.	Procedure # 3	
	Elementary Grades 3-4 2. Use various informational parts of a text (e.g., index, table of contents, glossary, appendices).	Procedure # 3	
	Elementary Grades 3-4 4. Summarize informational texts (e.g., identify the main idea or concept and the supporting detail).	Procedure # 3	
	Elementary Grades 3-4 7. Recognize when and how new information in a text connects to prior knowledge.	Procedure # 3 Procedure #4 When the research is complete, each team of students is to design and build a model or small replica of a zoo exhibit or aquarium habitat, which would be suitable for their animal's survival and comfort in captivity	
English/Language Arts H. Research-Related Writing and Speaking Students will work, write, and speak effectively when doing research in all content areas.	Elementary Grades 3-4 2. Use print and non-print resources (e.g., encyclopedias, dictionaries, people, indexes) to gather information on research topics.	Procedure #3 Inform them that each team will be expected to conduct library research or consult research materials or resource people to determine the life requirements of each creature.	
	Elementary Grades 3-4 3. Present information obtained from research in a way that combines various	Procedure #4 When the research is complete, each team of students is to design and build a model or small replica of a zoo exhibit or	

	forms of information (e.g., maps, charts, photos).	aquarium habitat, which would be suitable for their animal's survival and comfort in captivity.	
	Middle Grades 5-8 1. Collect and synthesize data for research topics from interviews and fieldwork, using note taking and other appropriate strategies.	Procedure #3 Ask each group to be responsible for designing an artificial habitat in which their animal could successfully live. Inform them that each team will be expected to conduct library research or consult research materials or resource people to determine the life requirements of each creature	
	Secondary Grades 1. Develop an appropriate strategy for finding information on a particular topic.	Procedure #3	
English/Language Arts G. Stylistic and Rhetorical Aspects of Writing and Speaking Students will use stylistic and rhetorical aspects of writing and speaking to explore ideas, to present lines of thought, to represent and reflect on human experience, and to communicate feelings, knowledge, and opinions.	Elementary Grades 3-4 7. Use a variety of media and technological resources to make creative and expository oral presentations.	Procedure #5 Ask each team to report to the class. Point out how their models are designed to meet the needs of the animal.	
	Middle Grades 5-8 6. Write and deliver oral presentations that achieve distinct purposes (e.g., to summarize, to narrate, to inform, to explain).	Procedure #5 Once the models are complete, ask each team to report to the rest of the class. Each report should include a description of the basic biological needs of each animal as well as a description of the characteristics of its natural habitat	
	Secondary Grades 5. Write pieces and deliver oral presentations that achieve distinct purposes (e.g., to persuade, evaluate, analyze, defend).	Procedure #5	
English/Language Arts F. Standard English Conventions Students will write and speak correctly, using conventions of standard written and spoken	Middle Grades 5-8 2. Demonstrate command of the conventions necessary to make an informal speech or presentation, effectively engaging peers and fielding	Procedure #5 Ask each team to report to the rest of the class.	

English.	responses.		
English/Language Arts	Elementary Grades 3-4	Procedure #5	
E. Processes of Writing and	4. Report orally and summarize personal	Ask each team to report to the rest of the class.	
Speaking	discoveries they have made as a result of	Procedure #7	
Students will demonstrate the ability	reading and viewing.	Ask the students to summarize the components of habitat	
to use the skills and strategies of the		that seemed to be necessary for the survival of the aquatic	
writing process.		animals they studied. (Food, water, shelter and space in a	
		suitable arrangement would be the minimum necessary	
		components.)	
	Elementary Grades 3-4	Evaluation #2	
	6. Summarize central concepts from oral	Pick an aquatic mammal, fish, amphibian or other aquatic	
	presentations.	animal. Describe the biological characteristics of the animal	
		and the kind of habitat requirements it has in order to	
		survive	
English/Language Arts	Secondary Grades	Extension #3	
D. Informational Texts	3. Use discussions with peers as a way	Discuss the reasons for and against keeping aquatic wildlife	
Students will apply reading,	of understanding information.	in captivity in zoos and aquaria.	
listening, and viewing strategies to			
informational texts across all areas			
of curriculum.			
	Middle Grades 5-8	Procedure #4	
	6. Describe new knowledge presented in	When the research is complete, each team of students is to	
	informational texts and how it can be	design and build a model or small replica of a zoo exhibit or	
	used.	aquarium habitat, which would be suitable for their animal's	
		survival and comfort in captivity	

Activity Title: WHALE OF A TAIL

Activity Guide Page #: 26

Objective(s): Students will: describe the sizes of different great whales compared to their own body size.

Method/Overview: Students use computational, graphing and measuring techniques to draw or sculpture life size replicas of whales on their school grounds.

Subject Area(s): Science, Math, Language Arts

Grade Level(s): 2-8

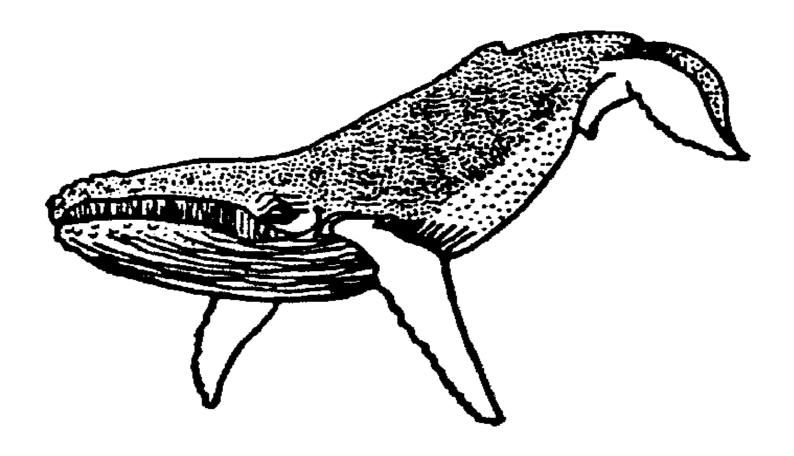
Subject Area(s). Science, Math, Lang	Performance Indicators		Notes to ensure high
Standard	(by grade clusters)	Evidence of alignment (text from activity description)	alignment for every student
English/Language Arts	Elementary Grades Pre-K-2	Procedure #2	ungiment for every student
A. Process of Reading	2. Demonstrate an understanding that	Gather information about the life history of the whale they	
Students will use the skills and	reading is a way to gain information	are studying to report to the class later.	
strategies of the reading process to	about the world.	are studying to report to the class fater.	
comprehend, interpret, evaluate, and	acout the world		
appreciate what they have read.			
upper and the second	Elementary Grades Pre-K-2	Procedure #2	
	4. Recognize and use rereading as an aid		
	to developing fluency and to		
	understanding appropriate material.		
	Elementary Grades Pre-K-2	Procedure #2	
	5. Figure out unknown words using a		
	variety of strategies including rereading,		
	context clues, and knowledge of word		
	structures and letter-sound relationships.		
	Elementary Grades Pre-K-2	Procedure #2	
	6. Recognize and use clues within the		
	text (sentence structure, word		
	meanings), rereading, and other		
	strategies as aids in developing fluency		
	and comprehension.		
	Elementary Grades Pre-K-2	Procedure #8	
	7. Ask questions and give other	Listen to the team, whose whale this is, present their report	
	responses after listening to presentations	on the whale.	
	by the teacher or classmates.		
	Elementary Grades 3-4	Procedure #2	
	1. Determine the meaning of unknown	Have the students go to reference sources.	
	words by using a dictionary, glossary, or		
	other reference sources.		

	F1	P1 #2	
	Elementary Grades 3-4	Procedure #2	
	2. Adjust reading speed to suit purpose		
	and difficulty of the material.		
	Middle Grades 5-8	Procedure #2	
	1. Formulate questions to be answered		
	while reading.		
	Middle Grades 5-8	Procedure #2	
	2. Reflect on what has been discovered		
	and learned while reading, and formulate		
	additional questions.		
	Middle Grades 5-8	Procedure #2	
	4. Use specific strategies (e.g.,		
	rereading, consultation) to clear up		
	confusing parts of a text.		
	Middle Grades 5-8	Procedure #2	
	6. Identify accurately both the author's	A A O O O O O O O O O O O O O O O O O O	
	purpose and the author's point of view.		
	Middle Grades 5-8	Procedure #2	
	7. Summarize whole texts by selecting	Flocedule #2	
	and summarizing important and		
	representative passages.	D 1 1/2	
	Middle Grades 5-8	Procedure #2	
	8. Read for a wide variety of purposes		
	(e.g., to gain knowledge, to aid in		
	making decisions, to receive		
	instructions, to follow an argument, to		
	enjoy).		
	Middle Grades 5-8	Procedure #2	
	9. Explain orally and defend opinions		
	formed while reading and viewing.		
	Middle Grades 5-8	Procedure #2	
	10. Adjust viewing and listening		
	strategies in order to comprehend		
	materials viewed and heard.		
	Middle Grades 5-8	Procedure #2	
	11. Generate and evaluate the notes they	- A S T T T T T T T T T T T T T T T T T T	
	have taken from course-related reading,		
	listening, and viewing.		
	notening, and viewing.		
English/Language Auto	Flomentary Grades 2.4	Drogodura #9	
English/Language Arts	Elementary Grades 3-4	Procedure #8	

B. Literature and Culture Students will use reading, listening, and viewing strategies to experience, understand, and appreciate literature and culture.	3. Respond to speakers in a variety of ways (e.g., listening attentively, responding politely).	Listen to the team whose whale this is present their report on the whale. The students listening to the report might sit inside the outline of the whale while the report is being given	
	Elementary Grades 3-4 4. Share responses to quality literature with peers, citing reasons and making comparisons to other reading, or viewing, or to life experiences.	Procedure #8	
	Elementary Grades 3-4 11. Apply effective strategies to the reading and use of nonfiction (e.g., reference sources, articles, histories, biographies, autobiographies, diaries, and letters) using texts with an appropriate complexity of content and sophistication of style.	Extension #2 Research the current status of all species of whales. Find out about the work of the International Whaling Commission.	
English/Language Arts H. Research-Related Writing and Speaking Students will work, write, and speak effectively when doing research in all content areas.	Elementary Grades Pre-K-2 3. Record and share information gathered.	Procedure #2 Have the students go to reference sources to find out the sizes of the whales. Students should gather information about the life history of the whale they are studying to report to the class later.	
	Elementary Grades 3-4 2. Use print and non-print resources (e.g., encyclopedias, dictionaries, people, indexes) to gather information on research topics.	Procedure #2	
	Middle Grades 5-8 6. Use magazines, newspapers, dictionaries, journals, and other print sources to gather information for research topics.	Procedure #2	
	Middle Grades 5-8 7. Use search engines and other Internet resources to collect information for research topics.	Extension #2 Research the current status of all species of whales. Find out about the work of the International Whaling Commission.	
English/Language Arts G. Stylistic and Rhetorical Aspects	Elementary Grades 3-4 4. Write pieces that show awareness of a	Extension #3 Prepare a bill of rights for all whales.	

of Writing and Speaking Students will use stylistic and rhetorical aspects of writing and speaking to explore ideas, to present lines of thought, to represent and reflect on human experience, and to communicate feelings, knowledge, and opinions.	variety of intended audiences and identifiable purposes.		
English/Language Arts E. Processes of Writing and Speaking Students will demonstrate the ability to use the skills and strategies of the writing process.	Elementary Grades Pre-K-2 1. Tell about experiences and discoveries, both orally and in writing.	Procedure #8 Present their report on the whale.	
	Elementary Grades 3-4 4. Report orally and summarize personal discoveries they have made as a result of reading and viewing.	Procedure #8	
English/Language Arts D. Informational Texts Students will apply reading, listening, and viewing strategies to informational texts across all areas of curriculum.	Elementary Grades 3-4 3. Read for a variety of purposes (e.g., to answer specific questions, to form an opinion, to skim for information).	Procedure #2 Students should gather information about the life history of the whale.	
English/Language Arts C. Language and Images Students will demonstrate an understanding of how words and images communicate.	Elementary Grades 3-4 4. Make observations about the use of language and graphic symbols encountered in various real-life situations.	Extension #3 Prepare a bill of rights for all whales.	
English/Language Arts B. Literature and Culture Students will use reading, listening,	Middle Grades 5-8 9. Apply effective strategies to the reading and use of moderately long	Procedure #2 Have the students go to reference sources to find out the sizes of the whales or provide this information for them. At	

and viewing strategies to	nonfiction texts (e.g., reference sources,	the same time the students should gather information about	
experience, understand, and	articles, editorials, histories,	the life history of the whale they are studying to report to the	
appreciate literature and culture.	biographies, autobiographies, diaries,	class later. They should try to find out such things as the	
	letters, and commentaries), which have	characteristics of the whale, what it eats, how it reproduces	
	an appropriate complexity of content	and cares for its young, its migration routes, its history in	
	and sophistication of style.	terms of whaling, and its current status.	



Activity Title: RIPARIAN RETREAT

Activity Guide Page #: 34

Objective(s): Students will: 1) describe habitat characteristics of riparian areas; 2) identify animals that inhabit them; and 3) state the importance of riparian areas to wildlife and humans.

Method/Overview: Awareness of a riparian zone is created through the use of a simulated field trip and artwork.

Subject Area(s): Language Arts, Science

Grada	Level(s):	6 12
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	Performance Indicators		Notes to ensure high
Standard	(by grade clusters)	Evidence of alignment (text from activity description)	alignment for every student
English/Language Arts	Middle Grades 5-8	Procedure #1	
A. Process of Reading	10. Adjust viewing and listening strategies	Encourage the students to talk and share descriptions of	
Students will use the skills and	in order to comprehend materials viewed	any area by a stream or riverbank they may have been to	
strategies of the reading process to	and heard.	– or at least have seen pictures of.	
comprehend, interpret, evaluate,			
and appreciate what they have read.			
	Middle Grades 5-8	Procedure #4	
	11. Generate and evaluate the notes they	Ask them to describe their favorite images. Students	
	have taken from course-related reading,	select art materials. Each should draw or paint his or her	
	listening, and viewing.	favorite images on the paper provided	
	Secondary Grades	Procedure #5	
	11. Represent key ideas and supporting	Ask the students to identify some of the characteristics of	
	details in various written forms (e.g.,	riparian areas reasons that riparian areas are important	
	outline, paraphrase, concise summary).	and have value – intrinsic value as well as value to	
		wildlife and humans.	
English/Language Arts	Middle Grades 5-8	Extension #3	
C. Language and Images	4. Use knowledge of the fundamental parts	Put your descriptions in writing – if you have not already!	
Students will demonstrate an	of speech when writing and speaking.	Combine words and pictures to convey some of the	
understanding of how words and		diversity in riparian areas.	
images communicate.			
	Secondary Grades	Procedure #4	
	1. Demonstrate an understanding of the		
	relationship among perception, thought,		
	and language.		
	Secondary Grades	Extension #3	
	6. Use dictionaries, handbooks, and other	Put your descriptions in writing – if you have not already!	
	language-related resources to evaluate the	Combine words and pictures to convey some of the	
	accuracy of their use of English.	diversity in riparian areas.	

English/Language Arts	Middle Grades 5-8	Extension #3	
G. Stylistic and Rhetorical Aspects	7. Write pieces and make remarks that use	Put your descriptions in writing – if you have not already!	
of Writing and Speaking	descriptive language to clarify, enhance,	Combine words and pictures to convey some of the	
Students will use stylistic and	and develop ideas.	diversity in riparian areas.	
rhetorical aspects of writing and		Evaluation #4	
speaking to explore ideas, to		Describe your position on a plan to develop a riparian	
present lines of thought, to		habitat for recreational use by hikers, bird watchers and	
represent and reflect on human		other "low impact" users	
experience, and to communicate		Procedure #4	
feelings, knowledge, and opinions.		Ask them to describe their favorite images.	
	Secondary Grades	Extension #3, Evaluation #4	
	2. Write pieces and deliver oral	and Procedure #4	
	presentations that effectively use		
	descriptive language to clarify, enhance,		
	and develop ideas.		
English/Language Arts	Middle Grades 5-8	Procedure #5	
E. Processes of Writing and	3. Ask questions and apply personal	Ask students to list, describe, and discuss some of the	
Speaking	interpretations in class discussion	many reasons that riparian areas are important and have	
Students will demonstrate the	following speeches and oral presentations.	value.	
ability to use the skills and			
strategies of the writing process.			
English/Language Arts	Secondary Grades	Procedure #5	
D. Informational Texts	3. Use discussions with peers as a way of	Ask students to list, describe, and discuss some of the	
Students will apply reading,	understanding information.	many reasons that riparian areas are important and have	
listening, and viewing strategies to		value.	
informational texts across all areas			
of curriculum.			

Activity Title: MERMAIDS AND MANATEES

Activity Guide Page #: 44

Objective(s): Students will: 1) describe how imaginary creatures may be inspired by actual animals: 2) distinguish between mythical and actual aquatic wildlife: and 3) give examples of how wildlife can inspire myth and art.

Method/Overview: Students describe aquatic animals using a narrative style of writing, which in turn is the basis for a drawing or painting done by classmates.

Subject Area(s): Language Arts, Science

Grade Level(s): 4-12

	Performance Indicators		Notes to ensure high
Standard	(by grade clusters)	Evidence of alignment (text from activity description)	alignment for every student
English/Language Arts	Elementary Grades 3-4	Procedure #6	
A. Process of Reading	1. Determine the meaning of unknown	Allow them to use any references or resources that are	
Students will use the skills and	words by using a dictionary, glossary, or	available.	
strategies of the reading process to	other reference sources.		
comprehend, interpret, evaluate,			
and appreciate what they have read.			
	Elementary Grades 3-4	Procedure #6	
	2. Adjust reading speed to suit purpose		
	and difficulty of the material.		
	Middle Grades 5-8	Procedure #6	
	1. Formulate questions to be answered		
	while reading.		
	Middle Grades 5-8	Procedure #6	
	2. Reflect on what has been discovered		
	and learned while reading, and formulate		
	additional questions.		
	Middle Grades 5-8	Procedure #6	
	4. Use specific strategies (e.g., rereading,		
	consultation) to clear up confusing parts		
	of a text.		
	Middle Grades 5-8	Procedure #7	
	6. Identify accurately both the author's	Once the research is finished, ask each crew to begin to	
	purpose and the author's point of view.	develop the written descriptions they are going to present to	
		the other crews	
	Middle Grades 5-8	Procedure #7	
	7. Summarize whole texts by selecting		
	and summarizing important and		
	representative passages.		

	Middle Grades 5-8 8. Read for a wide variety of purposes (e.g., to gain knowledge, to aid in making decisions, to receive instructions, to follow an argument, to enjoy). Middle Grades 5-8 9. Explain orally and defend opinions formed while reading and viewing.	Procedure #8 Once the descriptions are complete, each crew should prepare to read their group's description to another crew. It is useful to have the descriptions copied so they can be exchanged in writing, as well as prepared to be read aloud. Procedure #6 Have the different crews find out as much as they can about their animal's actual appearance, behavior and habitat. Allow them to use any references or resources that are available.	
	Middle Grades 5-8 10. Adjust viewing and listening strategies in order to comprehend materials viewed and heard.	Procedure #10 They should also now reveal their original source photos or specimens, looking for similarities and differences.	
	Secondary Grades 1. Demonstrate an understanding that reading is a gradual process of constructing meaning and revising initial understandings.	Procedure #9 Have each crew choose one other crew to work with. Provide written descriptions. The crew who receives the description then must create an image of the creature that was described. Reverse and repeat the process so that both of the paired crews have written descriptions to work with.	
	Secondary Grades 3. Identify the author's purpose and analyze the effects of that purpose on the text.	Procedure #7	
	Secondary Grades 8. Find the meaning of relatively uncommon technical terms used in informational texts.	Procedure #7	
	Secondary Grades 11. Represent key ideas and supporting details in various written forms (e.g., outline, paraphrase, concise summary).	Procedure #11 Display the original source pictures.	
English/Language Arts B. Literature and Culture Students will use reading, listening, and viewing strategies to experience, understand, and appreciate literature and culture.	Elementary Grades 3-4 3. Respond to speakers in a variety of ways (e.g., listening attentively, responding politely).	Procedure #8	
	Elementary Grades 3-4	Extension #2	

10. Apply effective strategies to the reading and interpretation of fiction (e.g., fantasies, fables, myths, mysteries, realistic and historical fiction, adventures, and humorous tales) that is appropriately complex in terms of character, plot, theme, and dialogue and appropriately sophisticated in style, point of view, and use of literary devices. Elementary Grades 3-4 11. Apply effective strategies to the reading and use of nonfiction (e.g., reference sources, articles, histories, biographies, autobiographies, diaries, and letters) using texts with an appropriate complexity of content and sophistication of style. Middle Grades 5-8 2. Identify specific interests and questions and pursue them by identifying pertinent literature and media. Middle Grades 5-8 8. Apply effective strategies to the reading and interpretation of fiction (e.g., science fiction, myths, mysteries, realistic and historical fiction, poems, adventure stories, and humorous tales), using texts that are appropriately complex in terms of character, plot, theme, structure, and dialogue and appropriately sophisticated in style, point of view, and use of literary devices.	Procedure #6 Have the different crews find out as much as they can about their animal's actual appearance, behavior and habitat. Allow them to use any references or resources that are available. Procedure #6 Extension #2 Research historical mythic creatures and propose animals that may have provided the source.	
Middle Grades 5-8 9. Apply effective strategies to the	Procedure #6	

	reading and use of moderately long		
	nonfiction texts (e.g., reference sources,		
	articles, editorials, histories, biographies,		
	autobiographies, diaries, letters, and		
	commentaries), which have an		
	appropriate complexity of content and		
	sophistication of style.		
	Middle Grades 5-8	Extension #2	
	11. Read literature and view films which		
	illustrate distinct cultures in various types		
	of works and formulate and defend		
	opinions gathered from the experience.		
	Secondary Grades	Extension #2	
	7. Apply mature strategies to the reading		
	and interpretation of lengthy adult level		
	fiction, (e.g., satires, parodies, plays,		
	poems, novels) using texts that are		
	complex in terms of character, plot,		
	theme, structure, and dialogue and		
	sophisticated in style, point of view, and		
	use of literary devices.		
	Secondary Grades	Extension #2	
	8. Apply mature strategies to the reading		
	and interpretation of lengthy adult level		
	nonfiction texts with appropriate		
	complexity of content and sophistication		
	of style.		
English/Language Arts	Elementary Grades 3-4	Procedure #6	
H. Research-Related Writing and	2. Use print and non-print resources (e.g.,		
Speaking	encyclopedias, dictionaries, people,	Extension #2	
Students will work, write, and speak	indexes) to gather information on		
effectively when doing research in	research topics.		
all content areas.			
	Elementary Grades 3-4	Procedure #12	
	4. Distinguish between facts encountered	Ask the students to summarize and review the steps they	
	in documents, narratives, and other	took, analyzing where they seemed most accurate and	
	in documents, narratives, and other	took, analyzing where they seemed most accurate and	

	sources and the generalizations or interpretations a person draws concerning those facts. Middle Grades 5-8 6. Use magazines, newspapers, dictionaries, journals, and other print sources to gather information for research topics.	inaccurate. Emphasize how readily descriptions can be distorted so as to provide exaggerations of what is described. Procedure #6 Extension #2	
English/Language Arts G. Stylistic and Rhetorical Aspects of Writing and Speaking Students will use stylistic and rhetorical aspects of writing and speaking to explore ideas, to present lines of thought, to represent and reflect on human experience, and to communicate feelings, knowledge, and opinions.	Elementary Grades 3-4 1. Write pieces and make remarks that begin to use descriptive language that clarifies, enhances, and develops ideas.	Extension #1 Write a mythic story about a real aquatic creature. Show how the myth might have a basis in fact. Procedure #7 Develop written descriptions.	
	Middle Grades 5-8 7. Write pieces and make remarks that use descriptive language to clarify, enhance, and develop ideas.	Extension #1 Procedure #7	
	Secondary Grades 2. Write pieces and deliver oral presentations that effectively use descriptive language to clarify, enhance, and develop ideas.	Extension #1 Procedure #7	
English/Language Arts E. Processes of Writing and Speaking Students will demonstrate the ability to use the skills and strategies of the writing process.	Elementary Grades 3-4 4. Report orally and summarize personal discoveries they have made as a result of reading and viewing.	Procedure #7 Once the research is finished, ask each crew to begin to develop the written descriptions they are going to present to the other crews.	
	Middle Grades 5-8 3. Ask questions and apply personal interpretations in class discussion following speeches and oral	Procedure #9 The crew who receives the description then must create an image of the creature that was described. Limit the number of questions the crews can ask of each other.	

	presentations.		
English/Language Arts	Elementary Grades 3-4	Procedure #6	
D. Informational Texts	3. Read for a variety of purposes (e.g., to		
Students will apply reading,	answer specific questions, to form an	Extension #2	
listening, and viewing strategies to	opinion, to skim for information).		
informational texts across all areas			
of curriculum.			
	Secondary Grades	Procedure #6	
	1. Scan a passage to determine whether a	Extension #2	
	text contains relevant information.		
	Secondary Grades	Extension #3	
	6. Explain how new information from a	Many times people only see part of an aquatic animal while	
	text changes personal knowledge.	the rest of the creature's body may remain unseen in dark or	
		murky water. To simulate that experience, cover up most	
		of a photograph of an aquatic animal. The animal's identity	
		should not be obvious	
English/Language Arts	Secondary Grades	Procedure #9	
C. Language and Images	1. Demonstrate an understanding of the	Procedure #10	
Students will demonstrate an	relationship among perception, thought,	Once both crews have completed their images, they should	
understanding of how words and	and language.	compare the written or oral descriptions with the resulting	
images communicate.		artwork. They should also now reveal their original source	
		photos or specimens, looking for similarities and	
		differences.	

Activity Title: KELP HELP

Activity Guide Page #: 48

Objective(s): Students will: list and describe different ways that kelp can be beneficial to humans, wildlife and the environment.

Method/Overview: Students research kelp, create a mural and report to the class about their findings.

Subject Area(s): Science, Language Arts

Grade Level(s): 6-8

Subject Area(s). Science, Language A	Performance Indicators		Notes to ensure high
Standard	(by grade clusters)	Evidence of alignment (text from activity description)	alignment for every student
English/Language Arts	Middle Grades 5-8	Procedure #1	
A. Process of Reading	1. Formulate questions to be answered	Divide the class into groups of four or five students. Assign	
Students will use the skills and	while reading.	(or have the students choose) topics such as the following to	
strategies of the reading process to		research related to kelp.	
comprehend, interpret, evaluate, and			
appreciate what they have read.			
	Middle Grades 5-8	Procedure #1	
	2. Reflect on what has been discovered		
	and learned while reading, and formulate		
	additional questions.		
	Middle Grades 5-8	Procedure #1	
	4. Use specific strategies (e.g.,		
	rereading, consultation) to clear up		
	confusing parts of a text.	D 1 #1	
	Middle Grades 5-8	Procedure #1	
	7. Summarize whole texts by selecting	Extension #1	
	and summarizing important and representative passages.	Investigate other aquatic plants and their role in aquatic habitats.	
	Middle Grades 5-8	Procedure #1	
	8. Read for a wide variety of purposes	Flocedule #1	
	(e.g., to gain knowledge, to aid in		
	making decisions, to receive		
	instructions, to follow an argument, to		
	enjoy).		
	Middle Grades 5-8	Procedure #4	
	9. Explain orally and defend opinions	Lead a class discussion about kelp, algae and the other	
	formed while reading and viewing.	freshwater and marine "weeds," inviting the students to react	
		to the information and insights shared by each group.	

	Middle Grades 5-8 10. Adjust viewing and listening strategies in order to comprehend materials viewed and heard.	Procedure #2 Once the research is finished, have each group visually summarize its findings on a large sheet of paper.	
	Middle Grades 5-8 11. Generate and evaluate the notes they have taken from course-related reading, listening, and viewing.	Procedure #1	
English/Language Arts H. Research-Related Writing and Speaking Students will work, write, and speak effectively when doing research in all content areas.	Middle Grades 5-8 6. Use magazines, newspapers, dictionaries, journals, and other print sources to gather information for research topics.	Procedure #1	
English/Language Arts F. Standard English Conventions Students will write and speak correctly, using conventions of standard written and spoken English.	Middle Grades 5-8 2. Demonstrate command of the conventions necessary to make an informal speech or presentation, effectively engaging peers and fielding responses.	Procedure #3 Verbally report on their findings.	
English/Language Arts E. Processes of Writing and Speaking Students will demonstrate the ability to use the skills and strategies of the writing process.	Middle Grades 5-8 3. Ask questions and apply personal interpretations in class discussion following speeches and oral presentations.	Procedure #4 Lead a class discussion about kelp, algae and the other freshwater and marine "weeds", inviting the students to react to the information and insights shared by each group.	
English/Language Arts D. Informational Texts Students will apply reading, listening, and viewing strategies to informational texts across all areas of curriculum.	Middle Grades 5-8 6. Describe new knowledge presented in informational texts and how it can be used.	Evaluation #1 What is kelp? Write a paragraph and draw a picture to illustrate your response. Evaluation #2 Describe two ways that kelp is helpful to humans, wildlife, and aquatic habitats.	

Activity Title: WETLAND METAPHORS

Activity Guide Page #: 56

Objective(s): Students will: 1) describe the characteristics of wetlands; and 2) demonstrate their understanding of the importance of wetlands to wildlife and humans.

Method/Overview: Students are presented with a selection of "hands-on" objects for investigation as metaphors for natural functions of wetlands.

Subject Area(s): Science, Language Arts

Grade Level(s): 1-12

	Performance Indicators		Notes to assure high
Standard	(by grade clusters)	Evidence of alignment (text from activity description)	alignment for every student
English/Language Arts	Elementary Grades Pre-K-2	Procedure #4	
A. Process of Reading	3. Make and confirm predictions about	With their list as a point of reference, help the students	
Students will use the skills and	what will be found in a text.	identify which plants and animals are actually most likely	
strategies of the reading process to		to be found in a wetland	
comprehend, interpret, evaluate, and			
appreciate what they have read.			
	Elementary Grades Pre-K-2	Procedure #4	
	5. Figure out unknown words using a		
	variety of strategies including rereading,		
	context clues, and knowledge of word		
	structures and letter-sound relationships.		
	Elementary Grades Pre-K-2	Procedure #4	
	6. Recognize and use clues within the		
	text (sentence structure, word		
	meanings), rereading, and other		
	strategies as aids in developing fluency		
	and comprehension.		
	Elementary Grades Pre-K-2	Procedure #4	
	7. Ask questions and give other		
	responses after listening to presentations		
	by the teacher or classmates.		
	Elementary Grades 3-4	Procedure #4	
	1. Determine the meaning of unknown		
	words by using a dictionary, glossary, or		
	other reference sources.		
	Elementary Grades 3-4	Procedure #4	
	2. Adjust reading speed to suit purpose		
	and difficulty of the material.		

Elementers Conden 2 4	Due se June #4	
Elementary Grades 3-4	Procedure #4	
5. Read a variety of narrative and		
informational texts independently and		
fluently.	70 1 114	
Middle Grades 5-8	Procedure #4	
1. Formulate questions to be answered		
while reading.		
Middle Grades 5-8	Procedure #4	
2. Reflect on what has been discovered		
and learned while reading, and formulate		
additional questions.		
Middle Grades 5-8	Procedure #4	
4. Use specific strategies (e.g.,		
rereading, consultation) to clear up		
confusing parts of a text.		
Middle Grades 5-8	Procedure #4	
6. Identify accurately both the author's		
purpose and the author's point of view.		
Middle Grades 5-8	Procedure #4	
8. Read for a wide variety of purposes		
(e.g., to gain knowledge, to aid in		
making decisions, to receive		
instructions, to follow an argument, to		
enjoy).		
Middle Grades 5-8	Procedure #4	
9. Explain orally and defend opinions	1 Toccure #T	
formed while reading and viewing.		
Middle Grades 5-8	Proceeding #0	
	Procedure #9	
10. Adjust viewing and listening	Following discussion and review of the functions	
strategies in order to comprehend	represented by each metaphor, ask the students to	
materials viewed and heard.	summarize the major roles that wetlands perform in	
75111 6 1 50	contributing to habitat for wildlife	
Middle Grades 5-8	Procedure #5	
11. Generate and evaluate the notes they	Next provide the students with background information	
have taken from course-related reading,	to serve as an overview to he basic ecological activities	
listening, and viewing.	that characterize the wetland habitat	
	Procedure #9	

	Secondary Grades 1. Demonstrate an understanding that reading is a gradual process of constructing meaning and revising initial understandings. Secondary Grades 2. Demonstrate an understanding that a	Procedure #4 Procedure #4	
	single text will elicit a wide variety of responses, each of which may be the point of view of the individual reader or listener.		
	Secondary Grades 6. Use the context of a work to determine the figurative, idiomatic, and technical meanings of terms.	Procedure #4	
	Secondary Grades 7. Use the context of a work to determine the meanings of abbreviations and acronyms.	Procedure #4	
	Secondary Grades 8. Find the meaning of relatively uncommon technical terms used in informational texts.	Procedure #4	
English/Language Arts B. Literature and Culture Students will use reading, listening, and viewing strategies to experience, understand, and appreciate literature and culture.	Elementary Grades Pre-K-2 4. Distinguish between fiction and nonfiction.	Procedure #4	
	Elementary Grades 3-4 3. Respond to speakers in a variety of ways (e.g., listening attentively, responding politely).	Procedure #2 Discuss the variety of wetlands found in your local area, state, country, etc Procedure #4 Procedure #6 Then, as a group, they must figure out how the object could represent what a wetland is or does. Procedure #9	

Elementary Grades 3-4 4. Share responses to quality literature with peers, citing reasons and making comparisons to other reading, or viewing, or to life experiences.	Procedure #6 Now bring out the "Mystery Metaphor Container." Tell the students that everything in the container has something to do with a wetland Procedure #7 Have a student from each group reach into the container and withdraw one object, ask students to work as a team to describe the relationships between their metaphoric object and the wetland Procedure #9	
Elementary Grades 3-4 11. Apply effective strategies to the reading and use of nonfiction (e.g., reference sources, articles, histories, biographies, autobiographies, diaries, and letters) using texts with an appropriate complexity of content and sophistication of style.	Procedure #4	
Middle Grades 5-8 2. Identify specific interests and questions and pursue them by identifying pertinent literature and media.	Procedure #4	
Middle Grades 5-8 9. Apply effective strategies to the reading and use of moderately long nonfiction texts (e.g., reference sources, articles, editorials, histories, biographies, autobiographies, diaries, letters, and commentaries) which have an appropriate complexity of content and sophistication of style.	Procedure #4	
Secondary Grades 3. Make abstract connections (e.g., connections about thoughts, ideas, values) between their own lives and the characters, events, and circumstances represented in various works.	Procedure #10 For the final part of this activity, encourage the students' understanding of how the wetlands' condition depends upon each of us. Many kinds of wildlife depend upon wetlands. Our own well-being requires wetland ecosystems	
Secondary Grades	Procedure #4	

English/Language Arts C. Language and Images Students will demonstrate an understanding of how words and images communicate.	8. Apply mature strategies to the reading and interpretation of lengthy adult level nonfiction texts with appropriate complexity of content and sophistication of style. Elementary Grades Pre-K-2 1. Distinguish between and make observations about formal and informal uses of English.	Procedure #4	
	Elementary Grades 3-4 3. Identify the use of nonverbal cues in conversations.	Procedure #3 Invite students to tell what they imagined. Compile a list of their offerings	
	Elementary Grades 3-4 3. Identify the use of nonverbal cues in conversations.	Procedure #3 Procedure #7 Procedure #8 Ask each group to report their ideas to the class. Procedure #9	
	Middle Grades 5-8 4. Use knowledge of the fundamental parts of speech when writing and speaking.	Procedure #3 Procedure #6 Procedure #7 Procedure #8 Procedure #9	
	Secondary Grades 1. Demonstrate an understanding of the relationship among perception, thought, and language.	Procedure #9	
English/Language Arts D. Informational Texts Students will apply reading, listening, and viewing strategies to informational texts across all areas of curriculum.	Elementary Grades Pre-K-2 1. Understand the main idea of simple expository information.	Procedure #4 With their list as a point of reference, help the students identify which plants and animals are actually most likely to be found in a wetland	
	Elementary Grades 3-4 1. Use information contained in chapter and section headings, topic sentences, and summary sentences to construct the main ideas.	Procedure #4	
	Elementary Grades 3-4 2. Use various informational parts of a	Procedure #4	

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text (e.g., index, table of contents,		
glossary, appendices).		
Elementary Grades 3-4	Procedure #4	
3. Read for a variety of purposes (e.g.,		
to answer specific questions, to form an		
opinion, to skim for information).		
Elementary Grades 3-4	Procedure #4	
4. Summarize informational texts (e.g.,		
identify the main idea or concept and the		
supporting detail).		
Elementary Grades 3-4	Procedure #4	
5. Recognize when a text is primarily		
intended to instruct or to persuade.		
Elementary Grades 3-4	Procedure #4	
6. Understand common technical terms		
used in instructional and informational		
texts.		
Elementary Grades 3-4	Procedure #4	
7. Recognize when and how new	11000date ii 1	
information in a text connects to prior		
knowledge.		
Middle Grades 5-8	Procedure #4	
1. Seek appropriate assistance when	Troccdure #4	
attempting to comprehend challenging		
text. Middle Grades 5-8	D 1 #4	
	Procedure #4	
2. Identify useful information organizing		
strategies.	D 1 //4	
Middle Grades 5-8	Procedure #4	
4. Identify different ways in which		
informational texts are organized.		
Middle Grades 5-8	Procedure #4	
5. Produce and support generalizations		
acquired from informational text.		
Middle Grades 5-8	Procedure #4	
6. Describe new knowledge presented in		
informational texts and how it can be		
used.		
Middle Grades 5-8	Procedure #4	
7. Identify common technical terms used		
in informational texts.		
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	Middle Grades 5-8 8. Use the various parts of a text (index, table of contents, glossary) to locate specific information.	Procedure #4	
	Secondary Grades 1. Scan a passage to determine whether a text contains relevant information.	Procedure #4	
	Secondary Grades 2. Distinguish between apparent fact and opinion in nonfiction texts.	Procedure #4	
	Secondary Grades 3. Use discussions with peers as a way of understanding information.	Procedure #3 Invite the students to tell what they imagined. Compile a list of offerings. Encourage discussion and mutual sharing. Procedure #2 and #6 Procedure #7 Procedure #8	
	Secondary Grades 4. Identify complex structures in informational texts and the relationships between the concepts and details in those structures using texts from various disciplines.	Procedure #4	
	Secondary Grades 5. Analyze and synthesize the concepts and details in informational texts.	Procedure #4	
English/Language Arts E. Processes of Writing and Speaking Students will demonstrate the ability to use the skills and strategies of the writing process.	Elementary Grades Pre-K-2 1. Tell about experiences and discoveries, both orally and in writing.	Procedure #3 Invite the students to tell what they imagined. Compile a list of offerings. Encourage discussion and mutual sharing. Procedure #8 Ask each group to report their ideas to the class.	
	Elementary Grades Pre-K-2 3. Respond to remarks or statements orally and in writing.	Procedure #9	
	Elementary Grades 3-4 4. Report orally and summarize personal discoveries they have made as a result of reading and viewing.	Procedure #9	

	Elementary Grades 3-4 6. Summarize central concepts from oral presentations. Middle Grades 5-8	Procedure #9	
	3. Ask questions and apply personal interpretations in class discussion following speeches and oral presentations.	Procedure #9 Procedure #10	
	Secondary Grades 4. Evaluate the remarks and oral presentations of others to find the key ideas, and explain the ways in which these ideas were developed.	Procedure #9	
English/Language Arts F. Standard English Conventions Students will write and speak correctly, using conventions of standard written and spoken English.	Elementary Grades Pre-K-2 2. Use oral language appropriate to the level of formality required.	Procedure #3 Invite the students to tell what they imagined. Compile a list of offerings. Encourage discussion and mutual sharing. Procedures #6 and #7 Evaluation #2 Name three reasons that wetlands are important.	
	Elementary Grades 3-4 1. Edit written work for standard English spelling and usage, evidenced by pieces that show and contain	Procedure #9	
	Elementary Grades 3-4 2. Use the level of language formality required in a variety of speaking situations.	Procedure #9 Procedure #10	
	Middle Grades 5-8 1. Edit written work for standard English spelling and usage, evidenced by pieces that show and contain	Procedure #9	
	Middle Grades 5-8 2. Demonstrate command of the conventions necessary to make an informal speech or presentation, effectively engaging peers and fielding	Procedure #10	

	raspansas		
	responses.	D1 #0	
	Secondary Grades	Procedure #9	
	1. Edit written work for standard English	Procedure #10	
	spelling and usage, evidenced by pieces	Evaluation #2	
	that show and contain	Describe how wetlands are important to each.	
	Secondary Grades	Procedure #7	
	2. Demonstrate how language usage may	Procedure #8	
	depend on the situation.		
	Secondary Grades	Procedure #9	
	3. Demonstrate command of the	Evaluation #1	
	conventions involved in a formal speech,	Explain why wetlands are called one of the world's most	
	effectively engaging peers during	productive ecosystems.	
	presentation and fielding responses	Evaluation #2	
	afterwards.	Select five species of animals and describe how	
		wetlands are important to each.	
English/Language Arts	Elementary Grades 3-4	Procedure #9	
G. Stylistic and Rhetorical Aspects	4. Write pieces that show awareness of a	Following discussion and review of the functions	
of Writing and Speaking	variety of intended audiences and	represented by each metaphor, ask the students to	
Students will use stylistic and	identifiable purposes.	summarize the major roles that wetlands perform in	
rhetorical aspects of writing and	Tuesta parposess	contributing to habitat for wildlife. List the ways in	
speaking to explore ideas, to present		which wetlands are important to humans, why do humans	
lines of thought, to represent and		convert wetlands to other uses? Ask them if their own	
reflect on human experience, and to		attitudes about wetlands are different now. If yes, how?	
communicate feelings, knowledge,		If not, why not?	
and opinions.		if not, why not?	
and opinions.	Middle Grades 5-8	D 1 #0	
		Procedure #9	
	3. Write pieces and deliver oral		
	presentations that use structures		
	appropriate to audience and purpose.		
	Middle Grades 5-8	Procedure #4	
	6. Write and deliver oral presentations	Procedures #6 and #7	
	that achieve distinct purposes (e.g., to	Procedure #8	
	summarize, to narrate, to inform, to	Ask each group to report their ideas to the class.	
	explain).	Procedure #9	
	Middle Grades 5-8	Procedure #9	
	8. Write pieces and deliver oral		
	presentations that include a variety of		
	sentence structures appropriate to the		
	purpose.		
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Middle Grades 5-8 10. Deliver oral presentations that use a variety of strategies of address (e.g., eye contact, hand gestures, voice Procedure #8 Procedure #9	
variety of strategies of address (e.g., eye	
contact hand gestures voice	
modulation, changes of rhythm).	
Secondary Grades Procedure #8	
2. Write pieces and deliver oral Procedure #9	
presentations that effectively use	
descriptive language to clarify, enhance,	
and develop ideas.	
Secondary Grades Procedure #8	
3. Write pieces and deliver oral Procedure #9	
presentations that include a variety of	
sentence structures and lengths.	
Secondary Grades Procedure #8	
4. Write pieces and deliver oral	
presentations that are targeted for Procedure #9	
various audiences (e.g., informed or	
uninformed, sympathetic or hostile).	
Secondary Grades Procedure #8	
5. Write pieces and deliver oral Procedure #9	
presentations that achieve distinct	
purposes (e.g., to persuade, evaluate,	
analyze, defend).	
Secondary Grades Procedure #8	
6. Write pieces and deliver oral Procedure #9	
presentations that effectively employ	
explicit transitional devices in order to	
change a situation or to move the	
reader/listener through the piece.	
Secondary Grades Procedure #7	
7. Write pieces and deliver oral describe the relationships between their metaphoric	
presentations in which the organization object and the wetland. Encourage the students to build	
of the work follows from the purpose. on each other's ideas	
Procedure #8	
Ask each group to report their ideas to the class.	

		Procedure #9	
	Sacandary Grades	Procedure #9 Procedures #7 and #8	
	Secondary Grades 8. Write pieces and deliver oral	Procedure #9	
	presentations in a personal style, with a	Procedure #9	
	discernible voice and effective wording.		
	Secondary Grades	Procedures #7 and #8	
	9. Write essays and deliver oral	Procedure #9	
	presentations that reliably support and	Procedure #9	
	provide details for the explicitly stated		
	generalizations.		
	Secondary Grades	Procedures #7 and #8	
	10. Make effective use of a variety of	Procedures #7 and #8	
	techniques to provide supporting detail	Procedure #9	
	(e.g., analogies, anecdotes, illustrations,	Procedure #9	
	detailed descriptions, restatements,		
	paraphrases, examples, comparisons) in		
	written work and oral presentations.		
	Secondary Grades	Procedures #7 and #8	
	11. Make effective use of a variety of	Flocedules #7 and #8	
	techniques for introducing and	Procedure #9	
	representing ideas and insights in written	1 Tocedule #9	
	work and oral presentations.		
English/Language Arts	Elementary Grades Pre-K-2	Procedure #4	
H. Research-Related Writing and	1. Develop a search strategy which uses	With their list as a point of reference, help the students	
Speaking	appropriate and available resources.	identify which plants and animals are actually most likely	
Students will work, write, and speak	appropriate and available resources.	to be found in a wetland. Have them classify the plants	
effectively when doing research in		and animals according to the kind of wetland in which	
all content areas.		they would be found.	
an content areas.	Elementary Grades Pre-K-2	Procedure #4	
	2. Formulate questions to ask when	1 Toccurrent	
	gathering information.		
	Elementary Grades Pre-K-2	Procedure #4	
	3. Record and share information	Procedures #7 and #8	
	gathered.	1 Toccadios II T and IIO	
	Elementary Grades 3-4	Procedure #4	
	1. Ask and seek answers to questions.		
	Elementary Grades 3-4	Procedure #4	
	2. Use print and non-print resources		
	(e.g., encyclopedias, dictionaries,		
	people, indexes) to gather information		
	on research topics.		
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Elementary Grades 3-4 4. Distinguish between facts encountered in documents, narratives, and other sources and the generalizations or interpretations a person draws concerning those facts. Middle Grades 5-8 1. Collect and synthesize data for research topics from interviews and field work, using note taking and other appropriate strategies.	Procedure #4 Procedure #4	
Middle Grades 5-8 2. Separate information collected for research topics into major components based on relevant criteria.	Procedure #4	
Middle Grades 5-8 3. Create bibliographies.	Procedure #4	
Middle Grades 5-8 4. Use available catalogs to locate materials for research reports.	Procedure #4	
Secondary Grades 5. Use government publications, indepth field studies, and almanacs for research.	Procedure #4	
Secondary Grades 7. Identify and use a variety of news sources (e.g., newspapers, magazines, broadcast and recorded media, artifacts), informants, and other likely sources for research purposes.	Procedure #4	
Secondary Grades 9. Make extensive use of primary sources when researching a topic and carefully evaluate the motives and perspectives of the authors.	Procedure #4	
Secondary Grades 11. Evaluate information for accuracy, currency, and possible bias.	Procedure #4	

Secondary Grades	Procedure #4	
12. Report orally,	using a variety of Procedure #6	
technological resor	urces to present the Procedures #7 a	and #8
results of a researc	ch project. <u>Procedure #9</u>	

Wetland Metaphors

After finishing up a unit investigating and writing about the many and varied habitats of Maine, middle school students took a field trip to Swan Island, in the Kennebec River in Richmond. There, many different habitats, including wetlands, are found on the one island and are easily recognizable. After taking the historic truck tour through the middle of the 4 mile long island, and identifying different habitats along the way, (woodlands, wetlands, ponds, fields, river, tidal mudflats, and more!) students were asked to zero in on the benefits of wetlands to wildlife, and to us. After their classroom research of the previous week, individuals were able to list, and point out during the island tour, many of the beneficial functions of different kinds of wetlands. The southern tip of Swan Island juts out into Merrymeeting Bay, the largest freshwater tidal estuary on the Atlantic coast, and the confluence of 7 rivers, including the Kennebec and Androscoggin rivers. The Metaphor Mystery Bag appeared, and teams drew an item from the bag that represents the function of a wetland. After several minutes of note-taking, examples and discussion, each team presented their item to the rest of the group, and gave a short talk on how the item related to the function of a wetland. The activity was a good wrap up to gauge students' understanding of the value of wetlands, give an oral presentation, and work together in teams. Students were then asked to individually write up their metaphoric discussions, and link them to a wetland site or experience they had while on the island.

Activity Title: BLUE RIBBON NICHE

Activity Guide Page #: 72

Objective(s): Students will: 1) identify different organisms that live in riparian ecosystems; 2) describe the ecological role of some organisms in riparian habitats; 3) describe some basic characteristics of riparian habitats; and 4) evaluate potential positive and negative effects from changes in riparian habitats.

Method/Overview: Students create a variety of representations of animals that live in riparian habitats.

Subject Area(s): Science, Language	Performance Indicators		Grade Level(s): 5-12 Notes to assure high
Standard	(by grade clusters)	Evidence of alignment (text from activity description)	alignment for every student
English/Language Arts A. Process of Reading Students will use the skills and strategies of the reading process to comprehend, interpret, evaluate, and appreciate what they have read.	Middle Grades 5-8 2. Reflect on what has been discovered and learned while reading, and formulate additional questions.	Procedure #2 You may want the students to consult references. Also, without additional research, many animals may not be identified research, many animals may not be identified which do live in the area.	angiment for every student
	Middle Grades 5-8 4. Use specific strategies (e.g., rereading, consultation) to clear up confusing parts of a text.	Procedure #2	
	Middle Grades 5-8 8. Read for a wide variety of purposes (e.g., to gain knowledge, to aid in making decisions, to receive instructions, to follow an argument, to enjoy).	Procedure #2	
	Middle Grades 5-8 9. Explain orally and defend opinions formed while reading and viewing.	Procedure #2	
	Middle Grades 5-8 10. Adjust viewing and listening strategies in order to comprehend materials viewed and heard.	Procedure #2	
	Middle Grades 5-8 11. Generate and evaluate the notes they have taken from course-related reading, listening, and viewing.	Procedure #7 Ask each student to go to his or her animal – one by one – to tell about the animal, its characteristics, its habitat and its niche in three or four sentences	

	Secondary Grades	Procedure #2
	1. Demonstrate an understanding that	
	reading is a gradual process of	
	constructing meaning and revising initial	
	understandings.	
		D
	Secondary Grades	Procedure #2
	2. Demonstrate an understanding that a	
	single text will elicit a wide variety of	
	responses, each of which may be the	
	point of view of the individual reader or	
	listener.	
	Secondary Grades	Procedure #2
		Flocedure #2
	3. Identify the author's purpose and	
	analyze the effects of that purpose on the	
	text.	
	Secondary Grades	Procedure #2
	8. Find the meaning of relatively	
	uncommon technical terms used in	
	informational texts.	
	Secondary Grades	Procedure #2
	9. Identify the philosophical assumptions	
	and basic beliefs underlying a particular	
	text.	
	Secondary Grades	Procedure #2
	11. Represent key ideas and supporting	2.10ccume n.2
	details in various written forms (e.g.,	
	outline, paraphrase, concise summary).	
English/Language Arts	Middle Grades 5-8	Procedure #2
B. Literature and Culture	9. Apply effective strategies to the	
Students will use reading, listening,	reading and use of moderately long	
and viewing strategies to	nonfiction texts (e.g., reference sources,	
experience, understand, and	articles, editorials, histories, biographies,	
appreciate literature and culture.	autobiographies, diaries, letters, and	
	commentaries) which have an appropriate	
	complexity of content and sophistication	
	of style.	
	Middle Grades 5-8	Procedure #2
	10. Demonstrate an understanding of the	
	defining features and structure of literary	
	texts encountered at this level.	D 1 10
	Secondary Grades	Procedure #2

English/Language Arts C. Language and Images Students will demonstrate an understanding of how words and images communicate.	8. Apply mature strategies to the reading and interpretation of lengthy adult level nonfiction texts with appropriate complexity of content and sophistication of style. Middle Grades 5-8 4. Use knowledge of the fundamental parts of speech when writing and speaking.	Procedure #2 Procedure #7 Evaluation #1 Identify and describe the habitat and niche of each of these organisms: raccoon, frog, fish, heron, mosquito. Evaluation #2 Name three other animals that are common in riparian ecosystems in your area. What is the niche of each?	
	Secondary Grades 1. Demonstrate an understanding of the relationship among perception, thought, and language.	Procedure #3 Have the students each choose an organism from the list create an art form representation of their animal use drawing, painting, collage, sculpture, magazine images – or any other art form of their choice Procedure #9 Now ask the students to consider things that might change this riparian zone so as to affect how suitable the habitat would be for the animals living there Procedure #12 Ask the students to summarize what they have learned about niche, habitat and riparian environments	
English/Language Arts D. Informational Texts Students will apply reading, listening, and viewing strategies to informational texts across all areas of curriculum.	Middle Grades 5-8 1. Seek appropriate assistance when attempting to comprehend challenging text.	Procedure #2	
	Middle Grades 5-8 2. Identify useful information organizing strategies.	Procedure #2	
	Middle Grades 5-8 4. Identify different ways in which informational texts are organized. Middle Grades 5-8 5. Produce and support generalizations	Procedure #2 Procedure #3 Procedure #3	

	acquired from informational text.		
	Middle Grades 5-8	Procedure #2	
	6. Describe new knowledge presented in	1 Toccure #2	
	informational texts and how it can be		
	used.		
	Middle Grades 5-8	D 1 #2	
		Procedure #2	
	7. Identify common technical terms used		
	in informational texts.	D 1 10	
	Middle Grades 5-8	Procedure #2	
	8. Use the various parts of a text (index,		
	table of contents, glossary) to locate		
	specific information.		
	Secondary Grades	Procedure #2	
	1. Scan a passage to determine whether a		
	text contains relevant information.		
	Secondary Grades	Procedure #2	
	2. Distinguish between apparent fact and		
	opinion in nonfiction texts.		
	Secondary Grades	Procedure #2	
	3. Use discussions with peers as a way of	Procedure #8	
	understanding information.	discuss the concepts of niches, habitats, and the	
		interrelatedness of all organisms in any ecosystem	
		Procedure #4	
		The students should become familiar with how the	
		organism they have chosen "makes a living." That is, they	
		should know its "occupation" in the habitat – its niche.	
		They should know what animals or plants their organism	
		depends upon and which organisms depend upon their	
		animal	
	Secondary Grades	Procedure #2	
	5. Analyze and synthesize the concepts	100000000000000000000000000000000000000	
	and details in informational texts.		
English/Language Arts	Middle Grades 5-8	Procedure #8	
E. Processes of Writing and	3. Ask questions and apply personal	11000ano no	
Speaking	interpretations in class discussion		
Students will demonstrate the	following speeches and oral		
ability to use the skills and	presentations.		
strategies of the writing process.	presentations.		
strategies of the writing process.	Secondary Grades	Procedure #8	
	4. Evaluate the remarks and oral	Procedure #9	
		Procedure #9 Procedure #10	
	presentations of others to find the key	rrocedure #10	

	ideas, and explain the ways in which these ideas were developed.	Have one or two students volunteer to demonstrate and evaluate the consequences of a change that would damage the habitat for one or more of the animals	
English/Language Arts F. Standard English Conventions Students will write and speak correctly, using conventions of standard written and spoken English.	Middle Grades 5-8 2. Demonstrate command of the conventions necessary to make an informal speech or presentation, effectively engaging peers and fielding responses.	Procedure #8	
	Secondary Grades 2. Demonstrate how language usage may depend on the situation.	Procedure #8 Procedure #12 Ask the students to summarize what they have learned about niche, habitat and riparian environments	
	Secondary Grades 3. Demonstrate command of the conventions involved in a formal speech, effectively engaging peers during presentation and fielding responses afterwards.	Procedure #8	
English/Language Arts G. Stylistic and Rhetorical Aspects of Writing and Speaking Students will use stylistic and rhetorical aspects of writing and speaking to explore ideas, to present lines of thought, to represent and reflect on human experience, and to communicate feelings, knowledge, and opinions.	Middle Grades 5-8 3. Write pieces and deliver oral presentations that use structures appropriate to audience and purpose.	Procedure #2	
	Middle Grades 5-8 6. Write and deliver oral presentations that achieve distinct purposes (e.g., to summarize, to narrate, to inform, to explain).	Procedures #3 and #9	
	Middle Grades 5-8 10. Deliver oral presentations that use a variety of strategies of address (e.g., eye contact, hand gestures, voice modulation, changes of rhythm).	Procedure #7 Ask each student to go to his or her animal to tell about he animal, its characteristics, its habitat and its niche in three or four sentences	
	Secondary Grades 2. Write pieces and deliver oral	Procedure #7	

1		I I	I
	presentations that effectively use		
	descriptive language to clarify, enhance,		
	and develop ideas.		
	Secondary Grades	Procedure #7	
	3. Write pieces and deliver oral		
	presentations that include a variety of		
	sentence structures and lengths.		
	Secondary Grades	Procedure #7	
	4. Write pieces and deliver oral		
	presentations that are targeted for various		
	audiences (e.g., informed or uninformed,		
	sympathetic or hostile).		
	Secondary Grades	Procedure #7	
		Procedure #7	
	5. Write pieces and deliver oral		
	presentations that achieve distinct		
	purposes (e.g., to persuade, evaluate,		
	analyze, defend).		
	Secondary Grades	Procedure #7	
	6. Write pieces and deliver oral		
	presentations that effectively employ		
	explicit transitional devices in order to		
	change a situation or to move the		
	reader/listener through the piece.		
	Secondary Grades	Procedure #7	
	7. Write pieces and deliver oral	<u> </u>	
	presentations in which the organization of		
	the work follows from the purpose.		
	the work follows from the purpose.		
	Secondary Grades	Due due #7	
		Procedure #7	
	8. Write pieces and deliver oral		
	presentations in a personal style, with a		
	discernible voice and effective wording.		
	Secondary Grades	Procedure #7	
	11. Make effective use of a variety of		
	techniques for introducing and		
	representing ideas and insights in written		
	work and oral presentations.		
English/Language Arts	Middle Grades 5-8	Procedure #2	
H. Research-Related Writing and	1. Collect and synthesize data for	Procedure #6	
Speaking	research topics from interviews and	Ask the students to disperse and place their "animals" in	
	The state of the s	The proof of the p	

Students will work, write, and speak effectively when doing research in all content areas.	fieldwork, using note taking and other appropriate strategies.	appropriate settings within the habitat – places in which their animals would live	
	Middle Grades 5-8 2. Separate information collected for research topics into major components based on relevant criteria.	Procedure #2	
	Middle Grades 5-8 5. Use indexes to periodical literature to locate information for research.	Procedure #2	
	Middle Grades 5-8 6. Use magazines, newspapers, dictionaries, journals, and other print sources to gather information for research topics.	Procedure #2	
	Middle Grades 5-8 7. Use search engines and other Internet resources to collect information for research topics.	Procedure #2	
	Secondary Grades 1. Develop an appropriate strategy for finding information on a particular topic.	Procedure #2	
	Secondary Grades 3. Record significant information from events attended and interviews conducted.	Extension #2 Investigate what kind of repairs can be done to riparian zones after extensive damage has occurred	
	Secondary Grades 4. Identify and use library information services.	Procedure #2	
	Secondary Grades 5. Use government publications, in-depth field studies, and almanacs for research.	Procedure #2	
	Secondary Grades 6. Use CD-ROM, microfiche, and similar resource media for research.	Procedure #2	
	Secondary Grades 7. Identify and use a variety of news sources (e.g., newspapers, magazines, broadcast and recorded media, artifacts), informants, and other likely sources for research purposes.	Procedure #2	

Secondary Grades	Procedure #2	
8. Use search engines and other Internet		
resources to do research.		
Secondary Grades	Extension #2	
9. Make extensive use of primary sources	Consult wildlife and conservation groups for advice.	
when researching a topic and carefully		
evaluate the motives and perspectives of		
the authors.		
Secondary Grades	Extension #2	
10. Analyze the validity and weigh the		
reliability of primary information sources		
and make appropriate use of such		
information for research purposes.		
Secondary Grades	Procedure #2	
11. Evaluate information for accuracy,		
currency, and possible bias.		
Secondary Grades	Procedure #7	
12. Report orally, using a variety of	Procedure #8	
technological resources to present the	Procedure #9	
results of a research project.	Procedure #10	

Activity Title: FISHY WHO'S WHO Activity Guide Page #: 86

Objective(s): Students will: 1) recognize and identify the major species of freshwater or saltwater fish that live in their area; 2) describe various values of fish species in some aquatic ecosystems; and 3) locate places where the fish species occur.

Method/Overview: Students do an inventory of fish habitats that exist in their area, obtain information about the various fish species that occur in these habitats, and locate the fish species on a map according to where they occur.

Subject Area(s): Science, Language A	arts		Grade Level(s): 4-12
	Performance Indicators		Notes to assure high
Standard	(by grade clusters)	Evidence of alignment (text from activity description)	alignment for every student
English/Language Arts	Elementary Grades 3-4	Procedure #3	
A. Process of Reading	1. Determine the meaning of unknown	Each team identifies possible sources of information about	
Students will use the skills and	words by using a dictionary, glossary, or	fish and fish habitats in the community, state, or region.	
strategies of the reading process to	other reference sources.	Have the teams develop a plan for getting the information.	
comprehend, interpret, evaluate, and			
appreciate what they have read.			
	Elementary Grades 3-4	Procedure #3	
	2. Adjust reading speed to suit purpose		
	and difficulty of the material.		
	Middle Grades 5-8	Procedure #3	
	1. Formulate questions to be answered		
	while reading.		
	Middle Grades 5-8	Procedure #3	
	2. Reflect on what has been discovered		
	and learned while reading, and formulate		
	additional questions.		
	Middle Grades 5-8	Procedure #3	
	4. Use specific strategies (e.g.,		
	rereading, consultation) to clear up		
	confusing parts of a text.		
	Middle Grades 5-8	Procedure #3	
	7. Summarize whole texts by selecting	Each team should then use their sources and develop	
	and summarizing important and	"biographies" for as many of the fish that occur in their area	
	representative passages.	as possible.	

Middle Grades 5-8	Dun and June #2
	Procedure #3
8. Read for a wide variety of purpose	es
(e.g., to gain knowledge, to aid in	
making decisions, to receive	
instructions, to follow an argument, to	o
enjoy).	
Middle Grades 5-8	Procedure #3
9. Explain orally and defend opinion	
formed while reading and viewing.	
Middle Grades 5-8	Procedure #5
10. Adjust viewing and listening	Have the teams meet and compare the information they got
strategies in order to comprehend	from different sources about the various fish and habitats
materials viewed and heard.	
Middle Grades 5-8	Procedure #5
11. Generate and evaluate the notes to	
have taken from course-related readi	ng,
listening, and viewing.	
Secondary Grades	Procedure #3
1. Demonstrate an understanding tha	t The state of t
reading is a gradual process of	
constructing meaning and revising in	itial
understandings.	
Secondary Grades	Procedure #3
2. Demonstrate an understanding tha	
single text will elicit a wide variety of	
responses, each of which may be the	
point of view of the individual reade	ror
listener.	
Secondary Grades	Procedure #3
3. Identify the author's purpose and	
analyze the effects of that purpose or	n the
text.	
Secondary Grades	Procedure #4
5. Identify the devices an author uses	
persuade readers and critique the	illustrations of the fish they have written about in their
effectiveness of the use of those devi	
effectiveness of the use of those devi	
	the fish is found
Secondary Grades	Procedure #3

	8. Find the meaning of relatively uncommon technical terms used in informational texts. Secondary Grades 9. Identify the philosophical assumptions and basic beliefs underlying a particular text. Secondary Grades 11. Represent key ideas and supporting details in various written forms (e.g.,	Procedure #5 Through this process of comparing research notes, the students should be able to improve the accuracy and completeness of their descriptions of the various fish and habitats. Procedure #3	
English/Language Arts B. Literature and Culture Students will use reading, listening, and viewing strategies to experience, understand, and appreciate literature and culture.	outline, paraphrase, concise summary). Elementary Grades 3-4 3. Respond to speakers in a variety of ways (e.g., listening attentively, responding politely).	Extension #4 Invite a local fish biologist to come and speak to the class about fish and fish habitat in the state, but only after you have created your displays so that the biologist can provide advice and make suggestions.	
	Elementary Grades 3-4 4. Share responses to quality literature with peers, citing reasons and making comparisons to other reading, or viewing, or to life experiences. Elementary Grades 3-4	Procedure #5 Have the teams meet and compare the information they got from different sources about the various fish and habitats. In some cases, the information may not agree. If so, the students might try to determine why. Procedure #5	
	11. Apply effective strategies to the reading and use of nonfiction (e.g., reference sources, articles, histories, biographies, autobiographies, diaries, and letters) using texts with an appropriate complexity of content and sophistication of style.		
	Middle Grades 5-8 2. Identify specific interests and questions and pursue them by identifying pertinent literature and media.	Procedure #3 Have each team of students identify possible sources of information about fish and fish habitats in the community, state, or region	
	Middle Grades 5-8 9. Apply effective strategies to the	Procedure #3	

	reading and use of moderately long nonfiction texts (e.g., reference sources, articles, editorials, histories, biographies, autobiographies, diaries, letters, and commentaries) which have an appropriate complexity of content and sophistication of style. Secondary Grades 8. Apply mature strategies to the reading and interpretation of lengthy adult level nonfiction texts with appropriate complexity of content and sophistication of style.	Procedure #5	
English/Language Arts C. Language and Images Students will demonstrate an understanding of how words and images communicate.	Elementary Grades 3-4 1. Identify and evaluate how language use varies according to personal situations and settings (e.g., school, home, and community).	Procedure #1 Ask the students what fish they think live in their area. Focus on identifiable boundaries such as their community, state or region Procedure #2 Obtain, or have the students, make a large map of the area they have chosen to study showing land as well as major bodies of water	
	Elementary Grades 3-4 3. Identify the use of nonverbal cues in conversations. Middle Grades 5-8	Procedure #5 Procedure #5	
	Form conclusions regarding formal, informal, and other varieties of language use, based upon experience. Middle Grades 5-8	Procedure #3	
	4. Use knowledge of the fundamental parts of speech when writing and speaking.	Procedure #5 Evaluation #3 List and describe a variety of reasons that fish are important.	
	Secondary Grades 1. Demonstrate an understanding of the relationship among perception, thought, and language.	Procedure #3 Procedure #5	
English/Language Arts D. Informational Texts Students will apply reading,	Elementary Grades 3-4 1. Use information contained in chapter and section headings, topic sentences,	Procedure #3	

listening, and viewing strategies to informational texts across all areas of curriculum.	and summary sentences to construct the main ideas.		
	Elementary Grades 3-4 2. Use various informational parts of a text (e.g., index, table of contents, glossary, appendices).	Procedure #3	
	Elementary Grades 3-4 3. Read for a variety of purposes (e.g., to answer specific questions, to form an opinion, to skim for information).	Procedure #3 Procedure #5	
	Elementary Grades 3-4 4. Summarize informational texts (e.g., identify the main idea or concept and the supporting detail).	Procedure #3	
	Elementary Grades 3-4 6. Understand common technical terms used in instructional and informational texts.	Procedure #3	
	Elementary Grades 3-4 7. Recognize when and how new information in a text connects to prior knowledge.	Procedure #3	
	Middle Grades 5-8 1. Seek appropriate assistance when attempting to comprehend challenging text.	Procedure #3	
	Middle Grades 5-8 2. Identify useful information organizing strategies.	Procedure #3	
	Middle Grades 5-8 4. Identify different ways in which informational texts are organized. Middle Grades 5-8	Procedure #3	
	5. Produce and support generalizations acquired from informational text.	Procedure #3 Procedure #5	
	Middle Grades 5-8 6. Describe new knowledge presented in informational texts and how it can be used.	Procedure #3	

	Middle Grades 5-8 7. Identify common technical terms used in informational texts.	Procedure #3	
	Middle Grades 5-8 8. Use the various parts of a text (index, table of contents, glossary) to locate specific information.	Procedure #3	
	Secondary Grades 1. Scan a passage to determine whether a text contains relevant information.	Procedure #3	
	Secondary Grades 3. Use discussions with peers as a way of understanding information.	Procedure #5	
	Secondary Grades 4. Identify complex structures in informational texts and the relationships between the concepts and details in those structures using texts from various disciplines.	Procedure #3	
	Secondary Grades 5. Analyze and synthesize the concepts and details in informational texts.	Procedure #3	
	Secondary Grades 6. Explain how new information from a text changes personal knowledge.	Procedure #3	
English/Language Arts E. Processes of Writing and Speaking Students will demonstrate the ability to use the skills and strategies of the writing process.	Elementary Grades 3-4 1. Identify strengths and weaknesses in their own writing and seek effective help from others.	Procedure #3	
	Elementary Grades 3-4 2. Improve their finished product by revising content from draft to final piece.	Procedure #3	
	Elementary Grades 3-4 3. Use planning, drafting, and revising to produce, on-demand, a well-developed, organized piece that demonstrates effective language use, voice, and	Procedure #3	

command of mechanics.		
Elementary Grades 3-4	Procedure #3	
4. Report orally and summarize personal	Procedure #5	
discoveries they have made as a result of		
reading and viewing.		
Middle Grades 5-8	Procedure #5	
1. Identify specific personal strategies,	Through this process of comparing research notes, the	
strengths, and weaknesses in writing,	students should be able to improve the accuracy and	
and use direct feedback from peers and	completeness of their descriptions of the various fish and	
teachers to revise and polish the content	habitats.	
of their finished pieces.		
Middle Grades 5-8	Procedure #3	
2. Use planning, drafting, and revising to		
produce, on demand, a well-developed,	Procedure #5	
organized piece that demonstrates		
effective language use, voice, and		
command of mechanics.		
Middle Grades 5-8	Procedure #3	
3. Ask questions and apply personal		
interpretations in class discussion	Procedure #5	
following speeches and oral		
presentations.	D 1 10	
Secondary Grades	Procedure #3	
1. Ask pertinent questions during writing		
conferences and when working alone,		
using knowledge of personal writing		
strategies, strengths, and weaknesses to		
improve one's own writing. Secondary Grades	Procedure #3	
2. Reflect on, evaluate, revise, and edit a	riocedule #3	
sequence of drafts to improve and polish		
finished work.		
illistica work.		
Secondary Grades	Procedure #3	
3. Use planning, drafting, and revising to		
produce, on demand, a well-developed,		
organized piece that demonstrates		
effective language use, voice, and		
command of mechanics.		

English/Language Arts	Secondary Grades 4. Evaluate the remarks and oral presentations of others to find the key ideas, and explain the ways in which these ideas were developed. Elementary Grades 3-4	Procedure #5 Procedure #3	
F. Standard English Conventions Students will write and speak correctly, using conventions of standard written and spoken English.	1. Edit written work for standard English spelling and usage, evidenced by pieces that show and contain	Procedure #5	
	Elementary Grades 3-4 2. Use the level of language formality required in a variety of speaking situations.	Procedure #3	
	Middle Grades 5-8 1. Edit written work for standard English spelling and usage, evidenced by pieces that show and contain	Procedure #3	
	Middle Grades 5-8 2. Demonstrate command of the conventions necessary to make an informal speech or presentation, effectively engaging peers and fielding responses.	Procedure #3	
	Secondary Grades 1. Edit written work for standard English spelling and usage, evidenced by pieces that show and contain	Procedure #3 Procedure #5	
	Secondary Grades 2. Demonstrate how language usage may depend on the situation.	Procedure #3	
	Secondary Grades 3. Demonstrate command of the conventions involved in a formal speech, effectively engaging peers during presentation and fielding responses afterwards.	Procedure #3 Procedure #5	
English/Language Arts	Elementary Grades 3-4	Procedure #3	

G. Stylistic and Rhetorical Aspects of Writing and Speaking Students will use stylistic and rhetorical aspects of writing and speaking to explore ideas, to present lines of thought, to represent and reflect on human experience, and to communicate feelings, knowledge, and opinions.	4. Write pieces that show awareness of a variety of intended audiences and identifiable purposes.		
	Elementary Grades 3-4 6. Explain how speakers use physical gestures and eye contact and use this	Procedure #5	
	knowledge in their own presentations. Middle Grades 5-8 3. Write pieces and deliver oral presentations that use structures appropriate to audience and purpose.	Procedure #3 Procedure #5	
	Middle Grades 5-8 6. Write and deliver oral presentations that achieve distinct purposes (e.g., to summarize, to narrate, to inform, to explain).	Procedure #3 Procedure #5	
	Middle Grades 5-8 7. Write pieces and make remarks that use descriptive language to clarify, enhance, and develop ideas.	Procedure #3	
	Middle Grades 5-8 8. Write pieces and deliver oral presentations that include a variety of sentence structures appropriate to the purpose.	Procedure #3	
	Middle Grades 5-8 9. Write pieces that use a variety of transitional devices (i.e. phrases, sentences, paragraphs).	Procedure #3 Procedure #5	
	Middle Grades 5-8 10. Deliver oral presentations that use a variety of strategies of address (e.g., eye contact, hand gestures, voice	Procedure #3 Procedure #5	

modulation, changes of rhythm).		
Secondary Grades	Procedure #3	
2. Write pieces and deliver oral	Procedure #5	
presentations that effectively use		
descriptive language to clarify, enhance,		
and develop ideas.		
Secondary Grades	Procedure #3	
3. Write pieces and deliver oral	Procedure #5	
presentations that include a variety of		
sentence structures and lengths.		
Secondary Grades	Procedure #3	
4. Write pieces and deliver oral	Procedure #5	
presentations that are targeted for		
various audiences (e.g., informed or		
uninformed, sympathetic or hostile).		
Secondary Grades	Procedure #3	
5. Write pieces and deliver oral	Procedure #5	
presentations that achieve distinct		
purposes (e.g., to persuade, evaluate,		
analyze, defend).		
Secondary Grades	Procedure #3	
6. Write pieces and deliver oral	Procedure #5	
presentations that effectively employ		
explicit transitional devices in order to		
change a situation or to move the		
reader/listener through the piece.	D 1 40	
Secondary Grades	Procedure #3	
7. Write pieces and deliver oral	Procedure #5	
presentations in which the organization		
of the work follows from the purpose.		
Secondary Grades	Procedure #3	
10. Make effective use of a variety of	Procedure #5	
techniques to provide supporting detail	1 Toccaute #5	
(e.g., analogies, anecdotes, illustrations,		
detailed descriptions, restatements,		
paraphrases, examples, comparisons) in		
written work and oral presentations.		
Secondary Grades	Procedure #3	
11. Make effective use of a variety of	Procedure #5	
11. Iviake effective use of a variety of	FIOCEGUIE #3	

	techniques for introducing and representing ideas and insights in written work and oral presentations.		
English/Language Arts H. Research-Related Writing and Speaking Students will work, write, and speak effectively when doing research in all content areas.	Elementary Grades 3-4 1. Ask and seek answers to questions.	Procedure #3	
	Elementary Grades 3-4 2. Use print and non-print resources (e.g., encyclopedias, dictionaries, people, indexes) to gather information on research topics.	Procedure #3	
	Elementary Grades 3-4 3. Present information obtained from research in a way that combines various forms of information (e.g., maps, charts, photos).	Procedure #3	
	Elementary Grades 3-4 4. Distinguish between facts encountered in documents, narratives, and other sources and the generalizations or interpretations a person draws concerning those facts.	Procedure #3	
	Elementary Grades 3-4 5. Demonstrate initial understanding of how to cite sources.	Procedure #3 Procedure #5	
	Middle Grades 5-8 1. Collect and synthesize data for research topics from interviews and field work, using note-taking and other appropriate strategies.	Procedure #3	
	Middle Grades 5-8 2. Separate information collected for research topics into major components based on relevant criteria. Middle Grades 5-8	Procedure #3 Procedure #5 Procedure #3	
	Mindale Grades 5 0	110004410 113	

3. Create bibliographies.		
Middle Grades 5-8	Procedure #3	
4. Use available catalogs to locate		
materials for research reports.		
Middle Grades 5-8	Procedure #3	
5. Use indexes to periodical literature to		
locate information for research.		
Middle Grades 5-8	Procedure #3	
6. Use magazines, newspapers,		
dictionaries, journals, and other print		
sources to gather information for		
research topics.		
Middle Grades 5-8	Procedure #3	
8. Make limited but effective use of		
primary sources when researching		
topics.		
Secondary Grades	Procedure #3	
1. Develop an appropriate strategy for		
finding information on a particular topic.	D 1 #2	
Secondary Grades	Procedure #3	
2. Use referencing while doing research. Secondary Grades	Procedure #3	
3. Record significant information from	Frocedure #3	
events attended and interviews		
conducted.		
Secondary Grades	Procedure #3	
4. Identify and use library information	110000010	
services.		
Secondary Grades	Procedure #3	
5. Use government publications, in-		
depth field studies, and almanacs for		
research.		
Secondary Grades	Procedure #3	
6. Use CD-ROM, microfiche, and		
similar resource media for research.		
Secondary Grades	Procedure #3	
7. Identify and use a variety of news		
sources (e.g., newspapers, magazines,		
broadcast and recorded media, artifacts),		

informants, and or research purpose	other likely sources for		
Secondary Grade 8. Use search en	es Procesigines and other Internet	cedure #3	
resources to do r Secondary Grade		cedure #3	
	earching a topic and the motives and		
reliability of prin sources and mak	alidity and weigh the	cedure #3	
Secondary Grade 11. Evaluate info currency, and po	rmation for accuracy,	cedure #3	
	, using a variety of ources to present the	cedure #3	

Activity Title: MIGRATION HEADACHE

Activity Guide Page #: 94

Objective(s): Students will: 1) list limiting factors affecting population of migrating water birds; 2) predict the effects of such limiting factors; 3) describe the effects of habitat loss and degradation on populations of migrating water birds; and 4) make inferences about the importance of suitable habitat for migrating water birds.

Method/Overview: Students role play migrating water birds traveling between nesting habitats and wintering grounds and are subject to hazards at either end of the migration path as well as along the way.

Subject Area(s): Science, Language Arts, Math, Science, Social Studies, Physical Education

Grade Level(s): 4-12

	Performance Indicators		Notes to assure high
Standard	(by grade clusters)	Evidence of alignment (text from activity description)	alignment for every student
English/Language Arts	Elementary Grades 3-4	Procedure #9	
H. Research-Related Writing and	1. Ask and seek answers to questions.	Ask them to try to imagine what seem to be the major	
Speaking		factors contributing to habitat loss and degradation. Ask	
Students will work, write, and		them to make predictions about the effects of these	
speak effectively when doing		factors. Distinguish between short-term and long-term	
research in all content areas.		effects. Distinguish between catastrophic effects and	
		gradual changes. Ask the students to support their	
		hypotheses with evidence, seeking additional information	
		through research if necessary.	



Activity Title: AQUATIC TIMES Activity Guide Page #: 126

Objective(s): Students will: 1) identify a diversity of issues related to aquatic organisms and habitats; and 2) develop their own opinions concerning some issues involving aquatic life and habitats.

Method/Overview: Students will investigate, write and produce a newspaper that features aquatic information and issues.

teachers to revise and polish the content

of their finished pieces.

Subject Area(s): Language Arts			Grade Level(s): 1-12
	Performance Indicators		Notes to assure high
Standards	(by grade clusters)	Evidence of alignment (text from activity description)	alignment for every student
English/Language Arts	Middle Grades 5-8	Procedure #2	
H. Research-Related Writing and	1. Collect and synthesize data for	Begin the research phase, asking the students to gather	
Speaking	research topics from interviews and field	information and ideas for their chosen section. Tell them	
Students will work, write, and	work, using note taking and other	that whatever they compile has to relate to aquatic	
speak effectively when doing	appropriate strategies.	animals and plants, aquatic habitats, or aquatic-related	
research in all content areas.		issues.	
	Middle Grades 5-8	Procedure #2	to demonstrate
	10. Demonstrate initial understanding of	Show the students how to properly acknowledge and	understanding, students use
	proper attribution (e.g., footnotes).	credit any sources they use.	footnotes in written work
English/Language Arts	Middle Grades 5-8	Procedure #4	
E. Processes of Writing and	1. Identify specific personal strategies,	Once the information accumulates and writing begins,	
Speaking	strengths, and weaknesses in writing, and	encourage the students to share their work with each	
Students will demonstrate the	use direct feedback from peers and	other. In this way, interests can merge and different	

talents can be called on . . .

ability to use the skills and

strategies of the writing process.

Activity Title: FACTS AND FALSEHOODS

Activity Guide Page #: 138

Grade Level(s): 7-12

Objective(s): Students will: 1) develop criteria for evaluating the quality, balance and fairness of an informational presentation; and 2) evaluate the balance and fairness of informational presentations designed to represent points of view about an environmental topic.

Method/Overview: Students analyze and evaluate print material according to criteria they establish for quality, balance, and fairness; then develop their own informational presentations using such criteria.

Subject Area(s): Language Arts, Social Studies, Science

	Performance Indicators	Evidence of alignment (text from	Notes to assure high alignment for
Standards	(by grade clusters)	activity description)	every student
English/Language Arts H. Research-Related Writing and Speaking Students will work, write, and speak effectively when doing research in all content areas. English/Language Arts G. Stylistic and Rhetorical Aspects of Writing and Speaking Students will use stylistic and rhetorical aspects of writing and speaking to explore ideas, to present lines of thought, to represent and reflect on human experience, and to communicate feelings, knowledge, and opinions.	Middle Grades 5-8 6. Use magazines, newspapers, dictionaries, journals, and other print sources to gather information for research topics. Middle Grades 5-8 3. Write pieces and deliver oral presentations that use structures appropriate to audience and purpose.	Procedure #1 Assemble a file of sample informational brochures from various public or private agencies and organizations Make sure some address aquatic topics or issues Procedure #9 OPTIONAL: Prepare a set of assignments in which groups of students are to act as the designers and developers of an informational brochure or program	must do optional procedure #9 in order to meet standard
English/Language Arts D. Informational Texts Students will apply reading, listening, and viewing strategies to informational texts across all areas of curriculum.	Secondary Grades 2. Distinguish between apparent fact and opinion in nonfiction texts.	Procedure #2 Does the article cite or list facts? What are they? Does the item make a claim? Is the claim based on or supported by facts or some sort of evidence? Procedure #4 Distribute the samples of informational brochures, handouts, or pamphlets that were collected and are related to aquatic and other environmental topics	

Activity Title: LIVING RESEARCH: AQUATIC HEROES AND HEROINES

Activity Guide Page #: 160

Objective(s): Students will: describe the importance of the accomplishments of local people who have contributed to conserving or preserving aquatic environments.

Method/Overview: Students identify people through news media, current events or other means who have made contributions to conserving or preserving aquatic environments, research their contributions, including by interviewing them; and write a biography.

Subject Area(s): Social Studies, Language Arts		
Performance Indicators		Notes to assure high
(by grade clusters)	Evidence of alignment (text from activity description)	alignment for every student
Secondary Grades	Procedure #4	 students should
1. Develop an appropriate strategy for	Each team should develop a research plan. This should	develop their own plans
anding information on a particular topic.		and record responses
		individually, not just as a
	who know or knew them	team
•		
•		
conducted.	note but the major question to be addressed	
Middle Grades 5-8	Procedure #5	
•		
	7	
		• should be done as an
<u>*</u>		individual, not a team
	each to give a brief oral report.	assignment
explain).		
	erformance Indicators by grade clusters) econdary Grades . Develop an appropriate strategy for nding information on a particular topic. econdary Grades . Record significant information from vents attended and interviews onducted.	Evidence of alignment (text from activity description) Procedure #4 Each team should develop a research plan. This should include the outline of any interviews they may want to conduct, whether with the person directly, or with others who know or knew them Procedure #5 Conduct the interviews. The basic format for the interview should include any personal history details of note but the major question to be addressed Ididdle Grades 5-8 Collect and synthesize data for esearch plan. This should include the outline of any interviews they may want to conduct, whether with the person directly, or with others who know or knew them Procedure #5 Conduct the interviews. The basic format for the interview should include any personal history details of note but the major question to be addressed Procedure #5 Collect and synthesize data for esearch plan. This should include the outline of any interviews they may want to conduct, whether with the person directly, or with others who know or knew them Procedure #5 Conduct the interviews. The basic format for the interview should include any personal history details of note but the major question to be addressed Procedure #5 Wrocedure #5 Write and deliver oral presentations at achieve distinct purposes (e.g., to immarize, to inform, to

Activity Title: SOMETHING'S FISHY HERE!

Activity Guide Page #: 176

Objective(s): Students will: 1) identify potential cause and effect relationships involving aquatic-related pollution; 2) examine their personal attitudes regarding aquatic pollution; 3) generate and evaluate alternative solutions to problems of aquatic pollution; and 4) outline a plan to initiate environmental action to reduce the negative consequences of aquatic pollution in their communities.

Method/Overview: Students read and discuss a story, inventing their own endings that lead to environmental action in their community.

Subject Area(s): Language Arts, Science, Social Studies			Grade Level(s): 2-8
	Performance Indicators		Notes to assure high
Standards	(by grade clusters)	Evidence of alignment (text from activity description)	alignment for every student
English/Language Arts	Middle Grades 5-8	Procedure #2	must do the optional
G. Stylistic and Rhetorical Aspects	2. Write stories that include major events,	After the students have all finished, discuss the story with	part of procedure #2;
of Writing and Speaking	develop settings, and deal with problems	them. Ask the students to think about as many different	write an ending for the
Students will use stylistic and	and solutions.	endings to the story as possible.	story
rhetorical aspects of writing and		OPTIONAL: Ask each student to write an ending for the	
speaking to explore ideas, to		story.	
present lines of thought, to			
represent and reflect on human			
experience, and to communicate			
feelings, knowledge, and opinions.			

